IN THE CLAIMS

The following listing of the claims is provided in accordance with 37 C.F.R. §1.121.

1. (previously presented) A Pelton turbine system comprising:

a runner mounted for rotation and configured to drive a generator;

a distributor for directing a flow of water to the runner;

at least one high efficiency injector assembly comprising a spherical valve configured to provide the flow of water from the distributor to the runner; and

at least one needle valve injector assembly comprising a needle valve for regulating the overall flow of water from the distributor to the runner.

2. (canceled)

3. (previously presented) The system of claim 1, wherein the spherical valve is configured either to provide a fully open flow path between the distributor and the runner in a fully opened position or to fully close the flow path between the runner and the distributor in a closed position.

4. (original) The system of claim 1, wherein the at least one high efficiency injector assembly and the at least one needle valve injector assembly are alternately disposed in the distributor.

5. (original) The system of claim 1, wherein a number of needle valve injector assemblies and a number of high efficiency injector assemblies are selected based upon power requirements of the Pelton turbine and a range of flow between the distributor and the runner.

6. (original) The system of claim 1, further comprising at least two high efficiency injector assemblies having identical sizes.

7. (original) The system of claim 1, wherein a flow rate of the at least one needle valve injector assembly is different from a flow rate of the at least one high efficiency injector assembly.

8. (original) The system of claim 1, wherein an effective cross-sectional flow area of the at least one needle valve injector assembly is smaller than an effective cross-sectional flow area of the at least one high efficiency injector assembly.

9. (original) The system of claim 1, comprising a control circuit configured to automatically operate the high efficiency injector assembly to provide a fully open flow path between the distributor and the runner in a fully opened position or to fully close the flow path between the runner and the distributor in a closed position.

10. (original) The system of claim 9, wherein the control circuit includes an appropriately programmed microprocessor.

11. (original) A Pelton turbine system comprising:

a runner mounted for rotation and configured to drive a generator;

a distributor for directing a flow of water to the runner;

at least one needle valve injector assembly comprising a needle valve for regulating the flow of water from the distributor to the runner; and

at least one high efficiency injector assembly comprising a spherical valve configured either to provide a fully open flow path between the distributor and the runner in a fully opened position or to fully close the flow path in a closed position.

12. (original) The system of claim 11, wherein the at least one high efficiency injector assembly and the at least one needle valve injector assembly are alternately disposed in the distributor.

13. (original) The system of claim 11, wherein a number of needle valve injector assemblies and a number of high efficiency injector assemblies are selected based upon power requirements of the Pelton turbine and a range of flow between the distributor and the runner.

14. (original) The system of claim 11, further comprising at least two high efficiency injector assemblies having identical sizes.

15. (original) The system of claim 11, wherein a flow path of the at least one needle valve injector assembly is different from a flow path of the at least one high efficiency injector assembly.

16. (original) The system of claim 11, further comprising a control circuit configured to execute a control to automatically operate the high efficiency injector assembly to provide a fully open flow path between the distributor and the runner in a fully opened position or to fully close the flow path between the runner and the distributor in a closed position.

17. (original) The system of claim 16, wherein the control circuit includes an appropriately programmed microprocessor.

18. (canceled)

19. (previously presented) A method for operating a Pelton turbine, the method comprising:

opening a needle valve of a needle valve injector assembly and a valve of a high efficiency injector assembly to a direct flow of water from a distributor to a runner; and

controlling the needle valve of the needle valve injector assembly to regulate a desired flow of water from the distributor to the runner;

wherein the pelton turbine comprises at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies to provide a modulated flow of water from the needle valve injector assemblies.

20. (previously presented) The method of claim 19, further comprising controlling the high efficiency injector assemblies and the needle valve injector assemblies to provide the desired flow of water to from the distributor to the runner.

21. (previously presented) A method for operating a Pelton turbine, the method comprising:

substantially simultaneously regulating flow through a needle valve of a needle valve injector assembly and a high efficiency valve of a high efficiency injector assembly to direct a flow of water from a distributor to a runner; and

controlling the needle valve injector assembly to provide a desired flow from the distributor to the runner;

wherein the pelton turbine comprises at least two needle valve injector assemblies alternately disposed with at least two high efficiency injector assemblies to provide a modulated flow of water from the needle valve injector assemblies.

22. (previously presented) The method of claim 21, further comprising automatically operating the high efficiency injector assemblies to provide a fully open

flow path between the distributor and the runner in a fully opened position or to fully close the flow path between the runner and the distributor in a closed position.

23.-26 (canceled)

27. (previously presented) A method for operating a Pelton turbine comprising:

removing at least two needle valve injector assemblies from a Pelton turbine between a distributor and a runner of a Pelton turbine to leave at least two other needle valve injector assemblies to direct flow from the distributor to the runner; and

disposing at least two high efficiency injector assemblies between the distributor and the runner in place of the removed at least two needle valve injector assemblies to direct a portion of overall flow from the distributor to the runner;

wherein the at least two high efficiency injector assemblies and the at least two needle valve injector assemblies are alternately disposed in the distributor.

28. (canceled)

29. (previously presented) The method of claim 27, wherein at least two needle valve injector assemblies and at least two high efficiency injector assemblies are selected based upon power requirements of the Pelton turbine and a range of flow of water between the distributor and the runner.

30. (previously presented) A pelton turbine system comprising:

a runner mounted for rotation and configured to drive a generator;

a distributor for directing a flow of water to the runner;

at least two high efficiency injector assemblies, each comprising a spherical valve configured to provide the flow of water from the distributor to the runner; and

at least two needle valve injector assemblies, each comprising a needle valve for regulating the overall flow of water from the distributor to the runner;

wherein the at least two high efficiency injector assemblies and the at least two needle valve injector assemblies are alternately disposed in the distributor.